



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

### TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462

(757) 518-2000 Fax (757) 518-2009

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Doug Domenech  
Secretary of Natural Resources

David K. Paylor  
Director

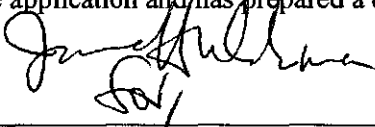
Francis L. Daniel  
Regional Director

## STATEMENT OF LEGAL AND FACTUAL BASIS

Hampton Roads Sanitation District - Army Base WWTP  
401 Lagoon Road, Norfolk, Virginia  
Permit No. TRO-60349

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Hampton Roads Sanitation District - Army Base WWTP has applied for a Title V Operating Permit for its 401 Lagoon Road, Norfolk, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:

  
Kelly R. Giles  
(757) 518-2155

Date:

6/29/10.

Air Permit Manager:

  
Jane A. Workman

Date:

6/29/10

Regional Director:

  
Francis L. Daniel

Date:

6/29/10

Attachments: 02/13/1973 Minor NSR Permit  
03/29/2005 Minor NSR Permit  
40 CFR 61, Subpart E

## I. FACILITY INFORMATION

### Permittee

Hampton Roads Sanitation District  
PO Box 5911

### Facility

Army Base WWTP  
401 Lagoon Road  
Norfolk, Virginia 23505

County-Plant Identification Number: 51- 710-00196

### A. SOURCE DESCRIPTION

NAICS Code: 221320 - Sewage Treatment Facilities

NAICS Code: 562219 - Non-hazardous Waste Treatment and Disposal

NAICS Code: 562213 - Solid waste combustors or incinerators, nonhazardous

The Hampton Roads Sanitation District (HRSD) is a political subdivision of the Commonwealth of Virginia and was established as a governmental instrument to provide for the public health and welfare by abating water pollution in the Hampton Roads area through the interception of wastewater outfalls and providing wastewater treatment plants. All of the HRSD treatment plants are interconnected for diverting wastewater flow to alternate treatment locations as the area's daily amount of generated wastewater flow varies along with the operational capabilities of each plant. The Army Base WWTP provides both primary and secondary municipal wastewater treatment for the Hampton Roads area, serving mainly Norfolk clients. The Army Base WWTP is rated to treat a design maximum average dry weather flow rate of 18 million gallon per day (mgd). The facility process units are grouped into four main functions: liquids management, solids handling, sludge incineration, and electrical generators.

**Liquids management**--Liquids management consists of all of the unit processes that treat the received wastewater prior to discharge to the Elizabeth River. These unit processes include the septic tank truck unloading station, headworks (influent screening and pumping)/grit removal chamber, aerobic reactors, primary and secondary clarification, and disinfection contact basin.

**Solids handling**--Solids handling consists of unit processes that collect and treat the screenings, and by-product solid materials from the liquid management section before it is sent to the sludge incinerator. These unit processes include the grit handling, raw and primary scum holding tank/concentrator, gravity thickeners, floatation thickener, dewatering centrifuges; biosolids screw conveyors, foreign biosolids storage and handling, biosolids belt conveyors, and ash storage/disposal.

**Sludge incineration**--Sludge incinerator units are comprised of two identical multi-hearth incinerators used to dispose of dewatered solids from the solids handling sections. Each incinerator has six hearths, a dedicated induced-draft fan, and air pollution control equipment for particulate matter consisting of a pre-cooler, venturi scrubber, and an impingement (tray) scrubber. The incinerators can fire either natural gas or distillate oil as supplemental fuel in the combustion process.

**Electrical generators**--One diesel engine electrical generator uses distillate oil. The electrical generator is used mainly for occurrences of normal power lost, but can also upon request be used to reduce the electrical demand for the local power company.

The facility is a Title V major source of SO<sub>2</sub>, CO and NO<sub>x</sub>. This source is located in an attainment area for all pollutants. The facility is permitted under Minor NSR Permits issued on 02/13/1973 and 03/29/2005.

North Carolina is an affected state.

## II. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

### III. EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Incinerators							
I-1/I-2	2	Multi hearth sludge incinerators (natural gas or distillate oil as backup), 1973	9 burners rated at 2.7 MM BTU/hr each per incinerator. 36 dry tons/day (sludge) per incinerator	Turbosonic Venturi and Swemco Impingement Plate Wet Scrubbers. 2009/2010.	ISBR-1/ ISBR-2	PM/PM-10 (Odor)	02/13/73 (State Only)
Liquids Management							
L-1	3a/3b	Liquids Management, 1943	18 mgd (dry) (wastewater)	Two stage packed tower scrubber (water plus NaOCl & NaOH). Daniel Mechanical. 1998	LSBR-1/ LSBR-2	(Odor)	N/A (State Only)
Plant electrical generators							
G-1	1b	Plant diesel engine electrical generator, 2005	1800 kW	N/A	N/A	N/A	03/29/05

\*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.  
(9 VAC 5-80-110 and Condition 4 of NSR permit issued on 02/13/73 and Condition 2 of NSR permit issued on March 29, 2005)

## IV. EMISSIONS INVENTORY

A copy of the 2009 annual emission update is attached. Emissions are summarized in the following tables.

2009 Criteria Pollutant Emissions in Tons/Year					
Emission Unit	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NO <sub>x</sub>
Incinerators	2.8	51.7	80.1	0.4	8.3
Liquids Management	4.6				
Generator	.1	0.9	0.1	0.1	3.6
<b>Total</b>	<b>7.5</b>	<b>52.6</b>	<b>80.2</b>	<b>0.5</b>	<b>11.9</b>

## V. EMISSION UNIT APPLICABLE REQUIREMENTS - Incinerators

### A. Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
9 VAC 5-50-80	Standards for Visible Emissions
9 VAC 5-60-70	Designation of Emission Standards (Mercury)
9 VAC 5-40-750	Standards for Particulate Matter (Incinerators)

The following Federal Regulations that have specific emission requirements have been determined to be applicable:

40 CFR 61 Subpart E NESHAP-Mercury

See also NSR permit issued 02/13/1973. The VA new source standards for opacity (9 VAC 5-50-80) were not promulgated until 08/09/75 – some two years after the 02/13/0973 permit was issued. The introduction to the new source standards (9 VAC 5-50-10) specify that the standards apply to all new source activity that has been conducted after March 17, 1972. The new source opacity standards, 20% with no more than one six-minute period not to exceed 30%, are the resultant values from the permit and Regulations that should be used for compliance.

### B. Monitoring

The following Virginia Administrative Codes that have specific monitoring requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
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The following Federal Regulations that have specific monitoring requirements have been determined to be applicable:

40 CFR 64 Compliance Assurance Monitoring

See also NSR permit issued 02/13/1973.

### C. Testing

The following Virginia Administrative Codes that have specific testing requirements have been determined to be applicable:

9 VAC 5-80-110 Permit Content

The following Federal Regulations that have specific testing requirements have been determined to be applicable:

40 CFR 61 Subpart E NESHAP-Mercury

Subpart E, Para 61.53(d) and 61.54, only requires an annual test for Hg (by means of an incinerator stack test performed using Method 101A of 40 CFR 61, Appendix B; or the sludge be tested for mercury levels using Method 105 of 40 CFR 61, Appendix B) if mercury emissions exceed 1,600 grams per 24-hour period.

The source conducted Hg testing during first title V permit cycle (June 2000) and used Method 29 for 40 CFR 503 stack emissions compliance and emissions were 17 grams/day (near 1/200 of standard). During the second permit cycle, the source tested biosolids fed to the hearth furnaces using SW-846 Method 7471A. Hg emissions were determined using equivalent equations to those listed in 40 CFR 61.54. Results from those tests are as follows:

Year	Hg Emission Rate (gram/day)
2007	8
2008	8
2009	6

The source is required to test the sludge for Hg under 40 CFR 503 every 60 days.

Since all Hg past test results have been very low and with the 40 CFR 503 requirement of a continuing Hg sludge test requirement of every 60 days, no additional 40 CFR 61, Subpart E Hg compliance testing was required for this title V cycle permit. This issue for more Subpart E testing will be reviewed again at the next renewal.

See also NSR permit issued 02/13/1973.

### D. Reporting

The permit includes reporting requirements for protocols, testing dates and results of stack tests conducted for PM or mercury and notifications for proposed plant changes that would potentially increase mercury emissions above 1,600 grams/24-hour period.

### E. Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include fuel supplier certifications, sludge or stack test results for mercury emissions, PM stack test results with PM emission factors used, PM CAM records, VEE records, operating procedures, maintenance records, operator training records, and daily (monthly average) dry ton biosolids feed rate to active incinerator(s).

## **VI. EMISSION UNIT APPLICABLE REQUIREMENTS - Liquids Management**

### **A. Limitations**

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
9 VAC 5-50-80	Standards for Visible Emissions

## **VII. EMISSION UNIT APPLICABLE REQUIREMENTS - Electrical Generator**

### **A. Limitations**

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
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See also NSR permit issued 03/29/2005.

### **B. Monitoring**

The following Virginia Administrative Codes that have specific monitoring requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
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See also NSR permit issued 03/29/2005.

### **C. Recordkeeping**

The following Virginia Administrative Codes that have specific recordkeeping requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
----------------	----------------

See also NSR permit issued 03/29/2005.

### **D. Testing**

The following Virginia Administrative Codes that have specific testing requirements have been determined to be applicable:

9 VAC 5-80-110	Permit Content
----------------	----------------

See also NSR permit issued 03/29/2005.

### E. Streamlined Requirements

The following conditions from the minor NSR permit of March 29, 2005 have been streamlined out of the Title V permit:

- Condition 3: The turbine engine generator was removed from the facility in 2006.
- Condition 4: The turbine engine generator was removed from the facility in 2006.
- Condition 9: The turbine engine generator was removed from the facility in 2006.
- Condition 7: The turbine engine generator was removed from the facility in 2006.
- Condition 6: The portion of this condition relating to the turbine engine generator was taken out due to the unit being removed from the facility in 2006.
- Condition 11: The portion of this condition relating to the turbine engine generator was taken out due to the unit being removed from the facility in 2006.
- Condition 12: The portion of this condition relating to the turbine engine generator was taken out due to the unit being removed from the facility in 2006.
- Condition 14: Notifications for the diesel engine generator are complete.

The following conditions in the minor NSR permit of February 13, 1973, have been streamlined into the Title V permit:

- Condition 1: Progress reports for construction of incinerators were submitted until operations began. No further reporting is required.
- Condition 2: Stack testing of new incinerators was accomplished after operations began.
- Condition 3: Notifications of proposed stack testing was accomplished
- Condition 4.1: Section IX of the Title V permit lists State-Only Enforcement issues. Odor is not only an issue for the incinerators but the entire facility (liquids management, solids handling, etc.). The source is complying with Article 5-2 for BACT on odor control for the incinerators by using the scrubber system to control PM on the incinerators. The CAM requirements for monitoring the incinerator scrubber system is a way to also monitor odor control for the incinerators. If PM emissions are minimized, odor is expected to be minimized.

The following conditions in the minor NSR permit of March 29, 2005 have been streamlined into the Title V permit by using the Title V boilerplate language on the same topic—NSR references were added to the Title V regulatory citations.

- Condition 1: Used Title V condition VIII.J
- Condition 2: Used Title V condition II
- Condition 15: Used Title V condition VIII.Q
- Condition 16: Used Title V condition VIII.F
- Condition 17: Used Title V condition VIII.H
- Condition 18: Used Title V condition VIII.O
- Condition 19: Used Title V condition VIII.V
- Condition 20: Used Title V condition VIII.T.2
- Condition 21: Used Title V condition VIII.L.1
- Condition 22: Used Title V condition VIII.S

The following conditions in the 40 CFR 61, Subpart E have been streamlined out of the Title V permit:

- Para 61.63 (d)(2)(i) and 61.54(a)(2): Initial testing of existing source. Source conducted this testing as required in the 1970's.
- Para 61.55(a): Monitoring. Not required as source has no emissions at the specified level to require more testing.



## F. GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

### 1. Comments on General Conditions

#### a. Condition B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 3-2006".

This general condition cite(s) the Article(s) that follow(s):

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

#### b. Condition F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources

9 VAC 5-40-50. Notification, Records and Reporting

9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:

40 CFR 60.13 (h). Monitoring Requirements.

#### c. Condition J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

d. Condition U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction  
9 VAC 5-80-110. Permit Content

e. Condition Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:

40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards  
9 VAC 5-80-110. Permit Content

## VIII. STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5-40-290	Existing Source Standards for Hydrogen Sulfide
9 VAC 5-60-220	Existing Source Standards for Toxics
9 VAC 5-40-140	Existing Source Standards for Odor
9 VAC 5-50-140	New Source Standards for Odor
9 VAC 5-60-320	New Source Standards for Toxics

## IX. FUTURE APPLICABLE REQUIREMENTS

There are no future applicable requirements at this time.

## X. INAPPLICABLE REQUIREMENTS

40 CFR 61, Subpart C: NESHAP for Beryllium. Subpart C was intended for a facility that uses beryllium or generates beryllium wastes and then disposes of it. Any beryllium found in the sludge is insignificant and incidental to the main purpose of the sludge incinerators.

40 CFR 60, Subpart O: NSPS for Sewage Treatment Plants. Subpart O was effective June 11, 1973 for new or modified sludge incinerators. This plant began construction before this date per the 02/13/1973 permit.

40 CFR 63, Subpart VVV: MACT for New and Reconstructed Major HAPs POTWs. This source is not a major source for HAPs.

40 CFR 60, Subpart Kb: NSPS for Volatile Organic Liquid Storage Vessels. This source does not store a VOC liquid product that is subject to the NSPS.

## XI. INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity 9 VAC 5-80-720 C)
ISU-CB-22	Solids Handling Emergency Generator	5-80-720 C.4	N/A	66 hp (80 kW)
ISU-T-25a/25b Distillate oil	Petroleum Liquid ASTs 25,000 gal each (installed prior to 1984)	5-80-720 B.2	VOC	N/A
ISU-T-27 Distillate oil (NSPS exempt)	Petroleum Liquid AST 20,000 gal (installed after 1984)	5-80-720 B.2	VOC	N/A
ISU-T-26	Petroleum Liquid AST 300 gal	5-80-720 B.2	VOC	N/A
ISU-T-28	Gasoline UST 550 gal	5-80-720 B.2	VOC	N/A
Solids Handling	Unit processes for solid by-products sent to incinerators	5-80-720 B.2	VOC	18 MGD (dry)

<sup>1</sup>The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

## **XII. CONFIDENTIAL INFORMATION**

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

## **XIII. PUBLIC PARTICIPATION**

The proposed permit will be placed on public notice in The Virginian-Pilot from May 14, 2010 to June 14, 2010.

Draft and proposed permit sent to affected state (NC) on May 13, 2010.

Draft and proposed permit sent to EPA on May 12, 2010.

[illegible]

Mr. William J. Love  
Hampton Roads Sanitation District  
Army Base Water Pollution Control Plant  
236 East Plume Street  
P. O. Box 1741  
Norfolk, Virginia 23501

DEAR Mr. Love:

Under the authority delegated to the Executive Director by the Board, the permit application submitted by the Hampton Roads Sanitation District is approved subject to the following conditions:

1. Quarterly progress reports be submitted to the Board and Regional Director, address below, beginning June 30, 1973.
2. Stack testing be done within 60 days after start up in accordance with section 2.06(f) (1). These tests will be subject to prior agreement between the source and the Board as to details of the methods of testing.
3. Written notification be given the Board and Regional Director 10 days in advance of the scheduled stack tests, so that same may be observed if deemed appropriate.
4. The furnace design criteria must conform with those delineated in your December 19, 1972 letter as follows:
  - i. No noticeable plume at a distance of fifty feet or greater.
  - ii. Visible emissions less than 20% opacity.
  - iii. Particulate emissions less than .14 grains per standard cubic foot dry flue gas corrected to 12% carbon dioxide.

Mr. William J. Love  
Page 2  
February 13, 1973

The above registration number has been assigned to this new installation. A full set of Registration forms should be completed and returned as soon as design details are available. The Regional Director in your area by copy of this letter is being asked to aid you in completing these forms.

You are cautioned that approval of this permit should not be construed to mean your operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. Regional personnel will be constantly evaluating all sources for compliance with Section 4.02.00 - Smoke or Other Visible Emissions and Section 4.04.02 - Control of Fugitive Dust. In addition, yearly up-dating of emissions from sources will require visits from staff personnel. Compliance with all air pollution regulations must be a continuing full time effort.

This permit approval is only applicable to the Air Pollution Control Board Permit Requirements and should not be construed to mean that permits required by other governmental agencies are also approved by this letter.

Sincerely,

W. R. Meyer  
Executive Director

WRM/NCB/asm

cc: Director of Enforcement  
Director of Engineering

Lucian B. McDonald  
State Air Pollution Control Board  
Pembroke One - Suite 610  
281 Independence Boulevard  
Virginia Beach, Virginia 23462



#271-03

# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.  
Secretary of Natural Resources

5636 Southern Boulevard  
Virginia Beach, VA 23462  
www.deq.state.va.us

Robert G. Burnley  
Director

Francis L. Daniel  
Tidewater Regional Director  
(757) 518-2000

March 29, 2005

Mr. D. R. Wheeler  
General Manager  
Hampton Roads Sanitation District - Army Base WWTP  
PO Box 5911  
Virginia Beach, Virginia 23471-0911

Location: Norfolk  
**Registration No.: 60349**  
AFS Id. No.: 51-710-00196

Dear Mr. Wheeler:

Attached is a permit to modify and operate a diesel engine electrical emergency/peaking generator in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This permit supersedes your permit dated November 12, 1976.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on February 10, 2005.

This approval to operate shall not relieve Hampton Roads Sanitation District – Army Base WWTP of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-180 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision (the date you actually received this decision or the date on which it was mailed to you, whichever occurred first), within which to initiate an appeal of this decision by filing a Notice of Appeal with:

Robert G. Burnley, Director  
Department of Environmental Quality  
PO Box 10009  
Richmond, Virginia 23240-0009

In the event that this decision is served on you by mail, three days are added to the period in which to file an appeal. Please refer to Rule 2A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please call Mr. Barry Halcrow at (757) 518-2184.

Sincerely,



Harold J. Winer  
Deputy Regional Director

HJW/BWH/HRSD Army Base generator min.doc

Attachment: Permit

cc. Director, OAPP (electronic file submission)  
Manager, Data Analysis (electronic file submission)





# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.  
Secretary of Natural Resources

5636 Southern Boulevard  
Virginia Beach, VA 23462  
www.deq.state.va.us

Robert G. Burnley  
Director

Francis L. Daniel  
Tidewater Regional Director  
(757) 518-2000

### STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This permit supersedes your permit dated November 12, 1976.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Hampton Roads Sanitation District  
Army Base Waste Water Treatment Plant  
PO Box 5911  
Virginia Beach, Virginia 23471-0911  
**Registration No.: 60349**  
**AFS Id. No.: 51-710-00196**

is authorized to operate

a diesel engine electrical emergency/peaking generator

located at

401 Lagoon Road  
Norfolk, Virginia 23505

in accordance with the Conditions of this permit.

Approved on March 29, 2005.

  
\_\_\_\_\_  
Director, Department of Environmental Quality (for)

Permit consists of 7 pages.  
Permit Conditions 1 to 22.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

### APPLICATION

1. Except as specified in this permit, the permitted facility is to be operated as represented in the permit application dated August 9, 1976, and February 10, 2005. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.  
(9 VAC 5-80-1210)

### PROCESS REQUIREMENTS

2. **Equipment List** - Equipment to be installed at this facility consists of:

- one diesel engine electrical emergency/peaking generator, rated at 1800 kW/hr

Previously permitted equipment at this facility consists of:

- one turbine engine emergency electrical generator, rated at 24.3 MMBTU/hr (2850 kW)

(9 VAC 5-80-1180.D.3)

3. **Equipment removed:**

- one turbine engine electrical generator, rated at 24.3 MMBTU/hr (2850 kW/hr).

This electrical generator shall be removed. This electrical generator may continue to operate until the new diesel engine electrical generator begins operation. Re-installation and operation of the turbine shall require a permit to construct and operate.

(9 VAC 5-80-1100)

### OPERATING/EMISSION LIMITATIONS

4. **Fuel** - The approved fuel for the turbine engine electrical generator is kerosine which meets the specifications for No.1-K grade kerosine under the American Society for Testing and Materials, ASTM D3699 "Standard Specification for Kerosine."

Maximum sulfur content per shipment:

0.05%.

A change in the fuel may require a permit to modify and operate.

(9 VAC 5-80-1180)

5. **Fuel** - The approved fuel for the diesel engine electrical generator is distillate oil and shall meet the specifications below:

DISTILLATE OIL which meets the specifications for fuel oil/diesel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396 "Standard Specification for Fuel Oils" or ASTM D975 "Standard Specification for Diesel Fuel Oils".

Maximum sulfur content per shipment:

0.05%.

A change in the fuel may require a permit to modify and operate.

(9 VAC 5-80-1180)

6. **Operating Hours** – The diesel engine electrical and turbine engine electrical generators shall each not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-1180)

7. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier for each shipment of kerosine. Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the kerosine was received;
- c. The volume of kerosine delivered in the shipment;
- d. A statement that the kerosine complies with the American Society for Testing and Materials specifications for No.1-K grade kerosine.
- e. The maximum sulfur content of the kerosine.

(9 VAC 5-80-1180)

8. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier for each shipment of distillate oil. Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the distillate oil was received;
- c. The volume of distillate oil delivered in the shipment;
- d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications for fuel oils/diesel fuels numbers 1 or 2.
- e. The maximum sulfur content of the distillate oil.

(9 VAC 5-80-1180)

9. **Emission Limits** - emissions from the operation of the turbine engine electrical generator shall not exceed the limits specified below:

PM/PM-10	2.9 lbs/hr	0.7 tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	21.4 lbs/hr	5.4 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these nominal emission limits may be determined as stated in Condition numbers 4, 6, 7, 11, and 12.  
(9 VAC 5-80-1180)

10. **Emission Limits** - emissions from the operation of the diesel engine electrical generator shall not exceed the limits specified below:

Carbon Monoxide	14.8 lbs/hr	3.7 tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	64.4 lbs/hr	16.1 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these nominal emission limits may be determined as stated in Condition numbers 5, 6, 8, 11, and 12.  
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

11. **Visible Emission Limit** - Visible emissions from each diesel engine and turbine engine electrical generator stack, shall not each exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.  
(9 VAC 5-50-80 and 9 VAC 5-80-1180)

## **RECORDS**

12. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

- The annual operating hours of each diesel engine and turbine engine electrical generators, calculated monthly as the sum of each consecutive 12-month period.
- All fuel supplier certifications.
- Operating procedures, maintenance records, and operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50)

13. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).  
(9 VAC 5-50-30 F)

#### **NOTIFICATIONS**

14. **Initial Notifications for new diesel electrical generator** - The permittee shall furnish written notification to the Director, Tidewater Regional Office:
- a. The anticipated start-up date of the new diesel engine electrical generator, postmarked not more than 60 days nor less than 30 days prior to such date.
  - b. The actual start-up date of the new diesel engine electrical generator, within 15 days after such date.
- (9 VAC 5-50-30 F)

#### **GENERAL CONDITIONS**

15. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
  - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
  - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
  - d. To sample or test at reasonable times.
- For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.  
(9 VAC 5-170-130)

16. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Director, Tidewater Regional Office in writing.  
(9 VAC 5-20-180 C)
17. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.  
(9 VAC 5-20-180 I)
18. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to process equipment which affect such emissions:
- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
  - b. Maintain an inventory of spare parts.
  - c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
  - d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.
- Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.  
(9 VAC 5-50-20 E)
19. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:
- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
  - b. Fails to comply with the terms or conditions of this permit;
  - c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;

- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
  - e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;
  - f. Fails to construct or operate this facility in accordance with the application for this permit or any amendment to it, or
  - g. Allow this permit to become invalid.  
(9 VAC 5-80-1210)
20. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Tidewater Regional Office of the change of ownership within 30 days of the transfer.  
(9 VAC 5-80-1240)
21. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.  
(9 VAC 5-170-160 and 9 VAC 5-20-160)
22. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.  
(9 VAC 5-170-160)